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Research Keywords

GPCR, PI3K alpha, Structural pharmacology, Drug discovery, Nanobody

Academic Career

M.B., 1982, Shanghai First Medical College; Ph.D., 1989, University of Cambridge (advisor: Sir Brian Heap); Professor, 2001-2021, Shanghai Institute of Materia Medica, Chinese Academy of Sciences; Chair Professor, 2020-present, Fudan University

Selected Publications

Molecular mechanisms of PI3K α activation by small-molecule activator 1938 and cancer-specific mutation H1047R. Liu, X., et al. *Cell Discovery*, 11, 77 (2025)

Structural insights into the development of inhibitors against cancer-specific mutations of PI3K α . Liu, X., et al. *Annual Review of Pharmacology and Toxicology* 66 (DOI: 10.1146/annurev-pharmtox-082924-022724) (2025)

Divergent activation patterns of BRS3 revealed by two Chinese herb-derived agonists. Li, J., et al. *Acta Pharmaceutica Sinica B* (DOI: 10.1016/j.apsb.2025.06.025) (2025)

Structural pharmacology and mechanisms of GLP-1R signaling. Zhou, Q.T., et al. *Trends in Pharmacological Sciences* (DOI: 10.1016/j.tips.2025.03.003) (2025)

Structural basis of the constitutive activity of the melanocortin receptor family. Feng, W.B., et al. *Structure*, 33, 1074-1087 (2025)

Molecular mechanism underlying non-discriminatory recognition of relaxin-3 by RXFP3 and RXFP4. Chen, Y., et al. *Communications Biology*, 8, 794 (2025)

Construction and application of a large capacity VNAR library from the whitespotted bamboo shark (*Chiloscyllium playgiosum*). Li, H., et al. *Acta Pharmaceutica Sinica B* (DOI: 10.1016/j.apsb.2025.02.012) (2025)

Weight Loss “Blockbuster” Development: A Role for “Unimolecular Polypharmacology.” Zhou, Q.T., et al. *Annual Review of Pharmacology and Toxicology*, 65, 191-213 (2025)

Why My Lab?

My lab can offer...

Complex protein structure determination (cryo-EM), molecular and cellular assays, small molecule/natural product drug discovery